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CHRISTOPHER P. MAIORANA, P.C.
24025 GREATER MACK
SUITE 200
ST. CLAIR SHORES, MI 48080

| EXAMINER | |
|---|---|
| GEORGE, KEITH M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2663 | |

DATE MAILED: 01/20/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/535,890 | JHA, PANKAJ K. | |
| | Examiner | Art Unit | |
| | Keith M. George | 2663 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-3,5-10 and 13-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-10 and 13-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. Figures 1-8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. If figures 1-8 are not prior art, applicant is required to distinctly point out which aspects of the invention are shown in these figures.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 13-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There does not appear to be any support in the specification for two or more channels separated by at least one channel that appears in lines 8-10 of claim 13.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-8, 12-18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Russell et al., U.S. Patent 6,584,118.

7. Regarding claim 1, Russell et al. discloses a frame configured to: be transmitted on a network (i.e. col. 5, ll. 23-31; the Ethernet frames are transported on a SDH network) and store one or more data packets in a plurality of channels (i.e. col. 6, ll. 9-13; Ethernet carries IP packets in the SDH virtual containers which are equivalent to channels), wherein a first one or more of said plurality of channels is configured to store one or more fragments of said one or more data packets (i.e. col. 11, ll. 54-67, col. 12 ll. 1-20 and figures 11 and 12; a 9 bit stuffing method used to fragment Ethernet data into 8 bits of user data plus the extra ninth bit set to "1").

8. Regarding claims 3-4, Russell et al. discloses a SONET/SDH fiber optic network (i.e. col. 5, ll. 23-31; the Ethernet frames are transported on a SDH fiber optic network).

9. Regarding claims 5-7, Russell et al. discloses one or more offset locators (i.e. fig. 9, 905); locator identifies the next fragment (i.e. col. 9, ll. 59-63; fragments are identified by means of pointers) and one or more trailer locators configured to identify an end of data packet (i.e. col. 10, ll. 9-12; pointer points to the end of frame within the user data portion).

10. Regarding claim 8, Russell et al. discloses fixed bandwidth channels (i.e. col. 9, ll. 43; all the channels are VC-3 channels which are the same bandwidth).

11. Regarding claim 12, Russell et al. discloses data packets are selected on a packet-by-packet basis (i.e. col. 10, ll. 9-12; each frame is read independently).

12. Regarding claims 13 and 20, Russell et al. discloses an apparatus and method comprising receiving and/or transmitting one or more of a plurality of frames (i.e. fig. 2, col. 5, ll. 23-31; the Ethernet frames are transported on a SDH network); configuring each frame to store one or more packets in a plurality of channels (i.e. col. 6, ll. 9-13; Ethernet carries IP packets in the SDH virtual containers which are equivalent to channels); and configuring the channels to store one or more fragments of the one or more packets (i.e. col. 11, ll. 54-67, col. 12 ll. 1-20 and figures 11 and 12; a 9 bit stuffing method used to fragment Ethernet data into 8 bits of user data plus the extra ninth bit set to "1"), each separated and linked by an offset pointer (i.e. fig. 9, 905; col. 10, ll. 9-13). Russell et al. discloses that to carry an Ethernet 1 Gbits/s channel over a synchronous network, the Ethernet channel is mapped into 7 VC4 containers, each having a capacity of 139 Mbits/s. If the segmentation and reassembly scheme later described by Russell et al. caused the frame to be segmented over two or more virtual containers, then they would be separated by at least one channel. As described, the pointer has the form: fbxxnnpppppppppp where nn denotes which of a plurality of virtual containers a first or last byte of the Ethernet data frame is in (col. 9 ll. 66 - col. 10, ll. 8).

13. Regarding claim 14, Russell et al. discloses data from each of a number of source channels is dynamically allocated in response to bandwidth demands (i.e. col. 10, ll. 24-26, virtual container is scalable according to data rate).

14. Regarding 15-17, 21 and 22, Russell et al. discloses each of the packets comprises an offset locator configured to point to a next fragment; header locators to identify the next fragment; and trailer to identify an end of the packet (i.e. col. 10, ll. 9-13).

15. Regarding claim 18, Russell et al. discloses fixed bandwidth channels (i.e. col. 9, ll. 43; all the channels are VC-3 channels which are the same bandwidth).

16. Regarding claim 23, Russell et al. discloses that to carry an Ethernet 1 Gbits/s channel over a synchronous network, the Ethernet channel is mapped into 7 VC4 containers, each having a capacity of 139 Mbits/s. If the segmentation and reassembly scheme later described by Russell et al. caused the frame to be segmented over two or more virtual containers, then they would be separated by at least one channel. As described, the pointer has the form: fbxxnnpppppppppp where nn denotes which of a plurality of virtual containers a first or last byte of the Ethernet data frame is in (col. 9 ll. 66 - col. 10, ll. 8).

### *Claim Rejections - 35 USC § 103*

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al.

19. Regarding claim 2, Russell et al. teaches that the packets could also be constant length such as cells (i.e. col. 5, ll. 60-61) and telecom data bandwidth such as E1 has a fix bandwidth of

2Mbits/s (i.e. TABLE 1). Russell et al. does not specifically disclose storing only complete packets from a fixed bandwidth source in a second channel. However, it would have been obvious to an ordinary person skilled in the art at the time of the invention to store complete cell in the Ethernet frame form a constant source such as E1. Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include from a fixed bandwidth source as taught by TABLE 1 with a second channel to store packets in order to adjust from one bandwidth to another to properly transmit on the new network.

20. Regarding claim 10, Russell et al. discloses that the packet could be packets of indeterminate length such as IP or constant length such as cells (i.e. col. 5, ll. 60-61). However, Russell et al. does not specifically disclose that the data packet is selected from a group consisting of IP, POS, PPP, ATM, G.702-based PDH, SRP, frame relay, and other appropriate packets. However, all those formats are standard protocol formats. Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include selecting those appropriate standard formatted packets with the frame of Russell et al. in order to increase scalability and compatibility by allowing the frame of Russell to function with other standard protocol systems.

21. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al. in view of Ramfelt et al., U.S. Patent 5,946,315.

22. Russell et al. discloses payload including a partial data (i.e. col. 11, ll. 54-67, col. 12 ll. 1-20 and figures 11 and 12; a 9 bit stuffing method used to fragment Ethernet data into 8 bits of user data plus the extra ninth bit set to "1"), but not specifically disclose reloading with a partial data load. However, Ramfelt et al. teaches that slots in the frame could be reloaded (i.e. col. 10,

ll. 48-52, slot reuse). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the slot reuse teaching of Ramfelt in the payload of Russell. One of ordinary skill in the art would have been motivated to do this because slot reuse is a general method to better utilize shared links in ring and bus network (Ramfelt, col. 10, ll. 47-48).

***Response to Arguments***

23. Applicant's arguments filed 15 October 2003 have been fully considered but they are not persuasive.

24. On page 12-14 of the amendment, referring to claims 1, 13 and 20, applicant argues that Russell does not disclose a first of a plurality of channels configured to store at least one of two or more fragments. In response, not only is it inherent to Russell that the IP packets can be fragments, it is explicitly stated that the Ethernet data is segmented (fragmented) using a 9 bit stuffing method. This method fragments the Ethernet data into 8 bits.

25. On page 13 of the amendment, referring to claim 13, applicant argues that Russell does not appear to disclose or suggest two or more channels separated by at least one of the plurality of channels. In response, Russell does teach a segmentation and reassembly scheme running over the payload of virtual container frames. This scheme will cause the Ethernet frame to be fragmented and split over a plurality of channels.

26. On page 14 of the amendment, referring to claim 20, applicant argues that Russell does not appear to disclose or suggest a first of the fragments in the first channel being linked by an offset pointer to a second of the fragments in the second channel. In response, Russell has been

shown to clearly teach segmentation and reassembly and in table 1 clearly teaches that to carry an Ethernet 1 GBits/s channel over a synchronous network, the Ethernet channel is mapped into 7 VC4 containers, each having a capacity of 139 MBits/s. In order to reassemble the Ethernet data, it would be inherent to the system to link the 7 VC4 containers together.

27. On pages 14 and 15 of the amendment, referring to claims 5-7 and 15-17, applicant argues that the pointers of Russell cannot simultaneously anticipate three different claimed locators. However, applicant agrees that the pointers of Russell do anticipate at least one of the locators by stating that two of the claims 5-7 and two of the claims 15-17 are patentable over the prior art. In response, while applicant has assigned different names to the offset locators, header locations and trailer locations, Russell has simply assigned a single name. The function of the pointers of Russell as described are identical to the function of the locators as described by the applicant. Given the acceptance by the applicant that the pointers of Russell is equivalent to at least one of the locators and since the locators are used by the applicant to achieve the common function of identifying the next fragment, the pointers of Russell clearly anticipate all of the locators.

***Conclusion***

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, alternate F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Keith M. George
13 January 2004

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 1/15/04